

What is claimed is:

5 (1) A method of processing an image wherein said image is viewed from a host, comprising the steps of:

10 (a) initiating a scan of an object within a broader field so as to obtain an input, wherein said input is capable of being converted to a signal representative of said input;

(b) converting said input to a signal representative of said input;

15 (c) comparing said input with each one of a set of stored inputs to determine a match; and

(i) if a match is determined, then causing an action to be performed in accordance with a set of instructions associated with said stored input; and

20 (ii) if a match is not determined then continuing to scan said broader field for a second or subsequent image to be subjected to said comparison step.

25 (2) The method of claim 1, wherein said converting step further comprises:

(a) converting said input via a fourier transform of said input to produce a transformed input; and

30 (b) filtering said transformed input using nonlinear filtering.

35 (3) The method of claim 1, wherein each one of said stored inputs are produced according to a method comprising the steps of:

(a) converting a predetermined input via a fourier transform of said predetermined input to produce a stored input; and

40 (b) filtering said stored input using nonlinear filtering.

(4) The method of claim 1, wherein said object is a particular road sign.

(5) The method of claim 1, wherein said object is a particular animal.

(6) The method of claim 1, wherein said stored input is indicative of one or more road signs.

(7) The method of claim 1, wherein said stored input is indicative of one or more animals.

(8) The method of claim 1, wherein at least one of said set of instructions comprises a stop instruction for stopping movement of said host.

(9) A method for automatically identifying a road sign from a moving vehicle, said method comprising the steps of:

(a) initiating a scan of a road sign so as to obtain an identifying input wherein said identifying input is capable of being converted to a signal representative of said road sign;

(b) comparing said identifying input with each one of a set of stored road sign inputs to determine a match; and

(i) if a match is determined, then causing an action to be performed in accordance with a set of instructions associated with said stored input; and

(ii) if a match is not determined then continuing to scan for a second or subsequent road sign to be subjected to said comparison step.

(10) The method of claim 9, wherein said converting step further comprises:

(a) converting said input via a fourier transform of said input to produce a transformed input; and

5 (b) filtering said transformed input using nonlinear filtering.

(11) The method of claim 1, wherein each one of said stored inputs are produced according to a method comprising the steps of:

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(a) converting a predetermined input via a fourier transform of said predetermined input to produce a stored input; and

(b) filtering said stored input using nonlinear filtering.

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(12) The method of claim 9, wherein said object is a particular road sign.

20 (13) The method of claim 9, wherein said object is a particular animal.

(14) The method of claim 9, wherein said stored input is indicative of one or more road signs.

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(15) The method of claim 9, wherein said stored input is indicative of one or more animals.

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(16) The method of claim 9, wherein at least one of said set of instructions comprises a stop instruction for stopping movement of said host.

35 (17) A system mounted on a host for processing an image comprising:

(a) means for scanning an image;

(b) conversion means for converting said scanned image to a set of data for comparison with one or more stored sets of data wherein said one or more stored sets of data are representative of one or more expected images;

5 (c) a set of instructions associated with each one of stored sets of data wherein said set of instructions is indicative of an action to be performed by said host if a match is determined between said set of data and a one of said stored sets of data;

10 (d) comparison means for comparing said set of data to each one of said stored sets of one or more images;

(e) determination means for determining whether or not said set of data matches one of said stored sets of data; and

15 (f) transmission means for transmitting a signal from said system to said host to react in accordance with said set of instructions.

20 (18) The system of claim 17, wherein said host is a vehicle and wherein said system is mounted on said vehicle so as to be in a position to scan for road signs.

25 (19) The system of claim 17, wherein said set of instructions comprises an instruction for said vehicle to stop in recognition of a stop sign.

30 (20) The system of claim 17, wherein said system further comprises:

(a) a first memory for storing said stored sets of data; and

(b) a second memory for storing said set of instructions.